NISTTech

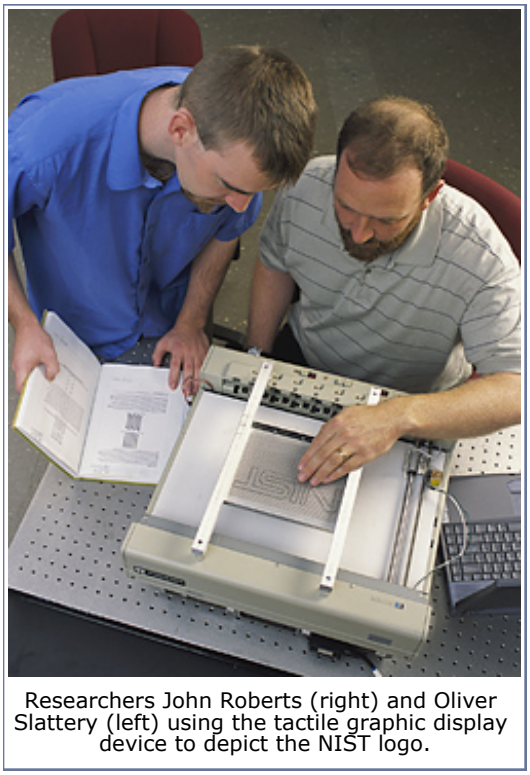
Extended Refreshable Tactile Graphic Array for Scanned Tactile Display

Enables visually impaired to feel electronic images

Description

This device enables the visually impaired to "see" or feel images found in e-books or on a computer. The Extended Refreshable Tactile Graphic Array for Scanned Tactile Display opens new windows for those with vision problems and at a much reduced cost to the public.

Images



Researchers John Roberts (right) and Oliver Slattery (left) using the tactile graphic display device to depict the NIST logo.

Applications

- **Military and security**
  For low visibility situations
- **Blind or visually impaired**
  Allows for tactile 'reading' of images and information

Advantages

- **Inexpensive**
  Does not require very sophisticated equipment
- **Small size**
  Can be held on a desk

Abstract

Apparatus and methods for extended refreshable tactile graphic display are disclosed, the apparatus including an array of pins at a display surface, with pin setting actuators and display surface matrix preferably being separable units. The display matrix is provided by stacked functional layers, functions including temporary pin retention and pin locking.

Inventors

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Citations

1. NIST Docket #99-021, U.S. Patent # 6,776,619, Refreshable Braille Reader: Apparatus & Method Utilizing Bi-Directional Relative Movement ,
2. NIST Docket #99-021CIP, U.S. Patent # 6,692,255, Refreshable Braille Reader: Apparatus & Method Utilizing Bi-Directional Relative Movement (Continuation-in-part Patent)
3. NIST Docket #02-002, U.S. Patent # 7,352,356, Refreshable Scanning Tactile Graphic Display for Localized Sensory Stimulation

Related Items

- Article: Device Lets Blind Feel Images
- Article: NIST Licenses Systems to Help the Blind
- Article: NIST 'Pins' Down Imaging System for the Blind (Abbreviated)

References

- U.S. Patent # 7,009,595 issued 03-07-2006, expires 01/03/2024
- Docket: 02-003US

Status of Availability

available for licensing; patent active

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